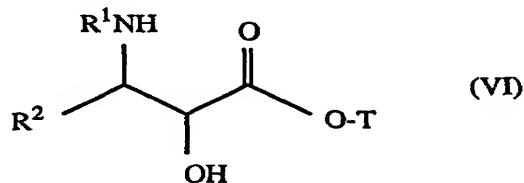


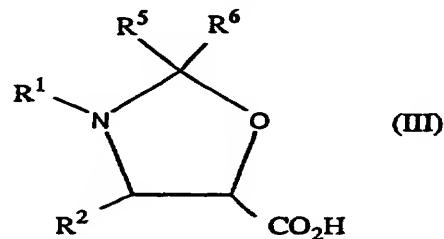
What is claimed is:

1. A method for the preparation of a compound of the following formula VI or salt thereof:
- 5



where

- 10 R^1 is hydrogen, arylcarbonyl, alkoxy carbonyl or alkylcarbonyl;
- R^2 is aryl, heterocyclo or alkyl; and
- T is a taxane moiety directly bonded at C-13 of said moiety;
- 15 comprising the steps of:
- (a) contacting a compound of the following formula III or salt thereof:



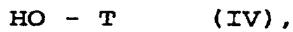
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where

- R^1 and R^2 are as defined above; and
- R^5 and R^6 are (a) each independently alkyl; or (b) together with the carbon atom to which they

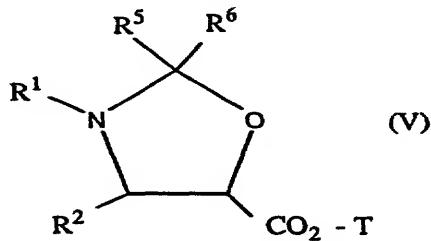
are bonded, form a cycloalkyl, cycloalkenyl or heterocyclo group;
with a compound of the following formula IV or salt thereof:

5



where T is as defined above, in the presence of a coupling agent, to form a compound of the following formula V or salt thereof:

10



15

where R¹, R², R⁵, R⁶ and T are as defined above; and

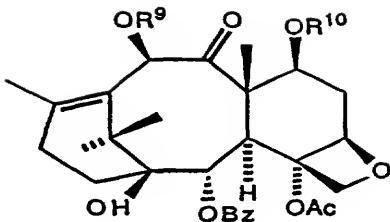
20

(b) contacting said compound of the formula V or salt thereof with a ring-opening agent, and, optionally, deprotecting one or more protected hydroxyl groups, to form said compound of the formula VI or salt thereof.

2. The method of claim 1, wherein

25

R¹ is arylcarbonyl or alkyloxycarbonyl;
R² is phenyl, thienyl or furyl;
R⁵ and R⁶ are each independently unsubstituted lower alkyl; and
T is the moiety:



where

R⁹ is hydrogen, alkylcarbonyl, or a hydroxyl protecting group; and

- 5 R¹⁰ is hydrogen or a hydroxyl protecting group.

3. The method of claim 1, wherein said coupling agent comprises a carbodiimide, employed together with 1-hydroxybenzotriazole or
10 N-hydroxysuccinimide; or a carbodiimide, bis(2-oxo-3-oxazolidinyl)phosphinic chloride, carbonyl diimidazole, pivaloyl chloride, or 2,4,6-trichlorobenzoyl chloride, wherein the aforementioned compounds are employed together with
15 an amine.

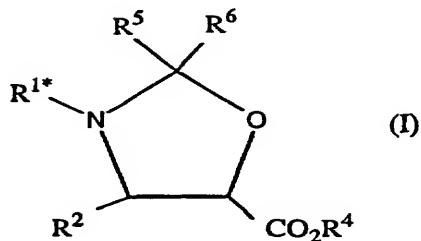
4. The method of claim 1, wherein said ring-opening agent is a Lewis acid.

20 5. The method of claim 4, wherein said Lewis acid is Pd(CH₃CN)₂Cl₂.

6. The method of claim 1, wherein said compound of the formula VI is paclitaxel.

25 7. The method of claim 1, wherein R¹ is the group R^{1*} in said compound of the formula III or salt thereof, and wherein said compound of the formula III or salt thereof is prepared by a method

comprising the step of contacting a compound of the following formula I or salt thereof:



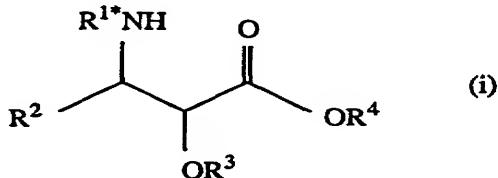
5

where

- R^2 , R^5 and R^6 are as defined above;
- R^4 is alkyl, alkenyl, alkynyl, aryl, cycloalkyl, cycloalkenyl, or heterocyclo; and
- 10 R^{1*} is hydrogen, arylcarbonyl, alkoxy carbonyl or alkylcarbonyl, with the proviso that R^{1*} is not tert-butoxycarbonyl when R^2 is aryl; with a hydrolyzing agent.

- 15 8. The method of claim 7, wherein said compound of the formula I or salt thereof is prepared by a method comprising the step of contacting a compound of the following formula i or salt thereof:

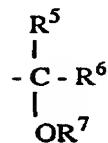
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where

R^{1*} , R^2 and R^4 are as defined above; and

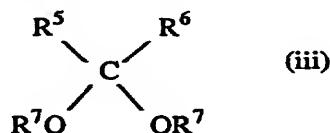
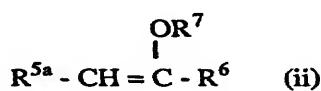
R^3 is hydrogen or the group R^3P , where R^3P is the group:



5

where R^5 and R^6 are as defined above, and R^7 is alkyl or aryl;

with an acid catalyst, and additionally,
where R^3 is hydrogen, with a compound of the
10 formula ii or iii:

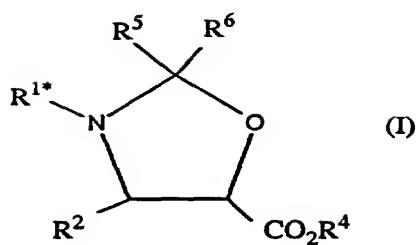


15

where R^5 , R^6 and R^7 are as defined above, and where R^{5a} (i) is a group such that $R^{5a}-CH_2-$ is R^5 or (ii) forms, together with R^6 and the atoms to which R^{5a} and R^6 are bonded, a cycloalkenyl or heterocyclo
20 group containing at least one carbon to carbon double bond.

9. A compound of the following formula I or salt thereof:

25



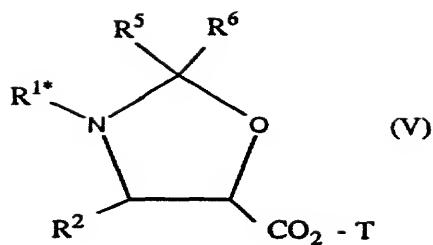
where

- 5 R^{1*} is hydrogen, arylcarbonyl, alkoxy carbonyl or alkylcarbonyl, with the proviso that R^{1*} is not tert-butoxycarbonyl when R^2 is aryl;
- 10 R^2 is aryl, heterocyclo or alkyl;
- 15 R^4 is hydrogen, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, cycloalkenyl, or heterocyclo; and
- 20 R^5 and R^6 are (a) each independently alkyl; or (b) together with the carbon atom to which they are bonded, form a cycloalkyl, cycloalkenyl or heterocyclo group.

- 15 10. A compound of claim 9 which is selected from the group consisting of:

- 20 (4*S*-trans)-3-benzoyl-2,2-dimethyl-4-phenyl-5-oxazolidinecarboxylic acid, ethyl ester;
- 25 (4*S*-trans)-3-benzoyl-2,2-dimethyl-4-phenyl-5-oxazolidinecarboxylic acid, lithium salt; and
- 25 (4*S*-trans)-3-benzoyl-2,2-dimethyl-4-phenyl-5-oxazolidinecarboxylic acid.

11. A compound of the following formula V or salt thereof:



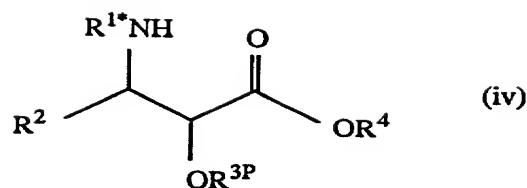
where

- 5 R^{1*} is hydrogen, arylcarbonyl, alkoxy carbonyl or alkylcarbonyl, with the proviso that R^{1*} is not tert-butoxycarbonyl when R^2 is aryl;
- 10 R^2 is aryl, heterocyclo or alkyl;
- 15 R^5 and R^6 are (a) each independently alkyl; or (b) together with the carbon atom to which they are bonded, form a cycloalkyl, cycloalkenyl or heterocyclo group; and
- 20 T is a taxane moiety directly bonded at C-13 of said moiety.

15 12. A compound of claim 11 which is

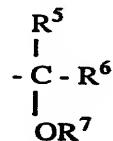
[2aR-(2a α ,4 β ,4a β ,6 β ,9 α (4S*,5R*),-11 α ,12 α ,12a α ,12b α]-3-benzoyl-2,2-dimethyl-4-phenyl-5-oxazolidinecarboxylic acid 6,12b-bis(acetoxy)-12-(benzoyloxy)-2a,3,4,4a,5,6,9,10,11,12,12a,12b-dodecahydro-11-hydroxy-4a,8,13,13-tetramethyl-5-oxo-4-[(triethylsilyl)oxy]-7,11-methano-1H-cyclodeca[3,4]benz[1,2-b]oxet-9-yl ester.

25 13. A compound of the following formula iv or salt thereof:



where

- 5 R^{1*} is hydrogen, arylcarbonyl, alkoxy carbonyl or
 alkylcarbonyl, with the proviso that R^{1*} is
 not tert-butoxycarbonyl when R^2 is aryl;
- 10 R^2 is aryl, heterocyclo or alkyl;
- 10 R^4 is hydrogen, alkyl, alkenyl, alkynyl, aryl,
 cycloalkyl, cycloalkenyl, or heterocyclo; and
- 10 R^{3P} is the group:

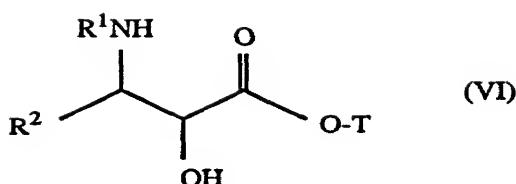


where

- 15 R^5 and R^6 are (a) each independently alkyl; or (b)
 together with the carbon atom to which they
 are bonded, form a cycloalkyl, cycloalkenyl or
 heterocyclo group; and
- 15 R^7 is alkyl or aryl.

20

14. A method for the preparation of a compound of the following formula VI or a salt thereof:



where

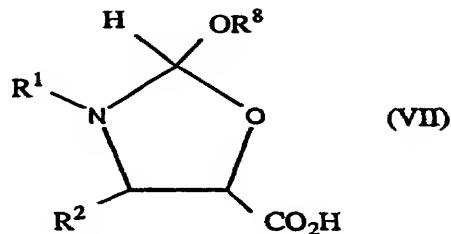
R^1 is hydrogen, arylcarbonyl, alkoxy carbonyl or
5 alkylcarbonyl;

R^2 is aryl, heterocyclo or alkyl; and

T is a taxane moiety directly bonded at C-13 of
said moiety;

comprising the steps of:

- 10 (a) contacting a compound of the
following formula VII or salt thereof:



- 15 where

R^1 and R^2 are as defined above; and

R^8 is alkyl or aryl;

with a compound of the following formula IV or salt
thereof:

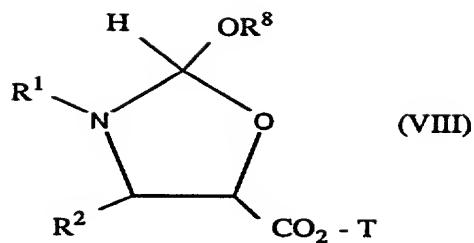
- 20



where T is as defined above, in the presence of a

coupling agent, to form a compound of the following

- 25 formula VIII or salt thereof:



where R^1 , R^2 , R^8 and T are as defined above; and

- 5 (b) contacting said compound of the formula VIII or salt thereof with a ring-opening agent, and, optionally, deprotecting one or more protected hydroxyl groups, to form said compound of the formula VI or salt thereof.

10

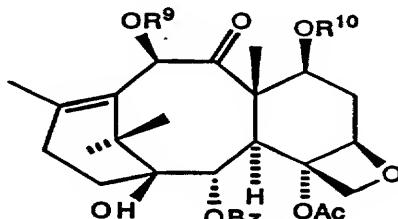
15. The method of claim 14, wherein

R^1 is arylcarbonyl or alkyloxycarbonyl;

R^2 is phenyl, thienyl or furyl;

15 R^8 is alkyl or aryl; and

T is the moiety:

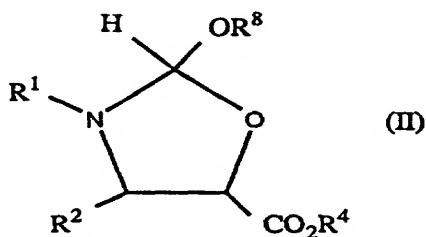


where

- 20 R^9 is hydrogen, alkylcarbonyl, or a hydroxyl protecting group; and

R^{10} is hydrogen or a hydroxyl protecting group.

16. The method of claim 14, wherein said coupling agent comprises a carbodiimide, bis(2-oxo-3-oxazolidinyl)phosphinic chloride), carbonyl diimidazole, pivaloyl chloride, or 2,4,6-
5 trichlorobenzoyl chloride; wherein the aforementioned compounds are employed together with 1-hydroxybenzotriazole, N-hydroxysuccinimide, or an amine.
- 10 17. The method of claim 14, wherein said ring-opening agent is a protic acid.
18. The method of claim 17, wherein said protic acid is an organic carboxylic acid and/or an
15 aqueous mineral acid.
19. The method of claim 14, wherein said compound of the formula VI is paclitaxel or taxotere.
- 20 20. The method of claim 14, wherein said compound of the formula VII or salt thereof is prepared by a method comprising the step of contacting a compound of the following formula II
25 or salt thereof:

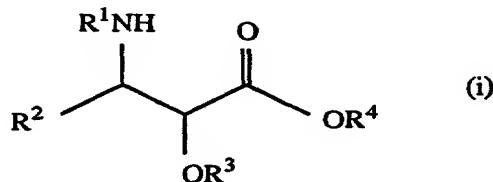


where R¹, R² and R⁸ are as defined above; and

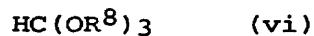
R^4 is alkyl, alkenyl, alkynyl, aryl, cycloalkyl, cycloalkenyl, or heterocyclo; with a hydrolyzing agent.

- 5 21. The method of claim 20, wherein said compound of the formula II or salt thereof is prepared by a method comprising the step of contacting a compound of the following formula i or salt thereof:

10



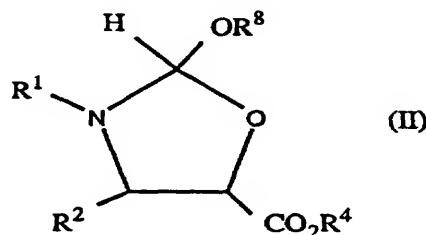
- where R^1 , R^2 and R^4 are as defined above; and R^3 is hydrogen;
- 15 with an acid catalyst and a compound of the following formula vi:



- 20 where R^8 is as defined above.

22. A compound of the following formula II or salt thereof:

25



where

R^1 is hydrogen, arylcarbonyl, alkoxy carbonyl or alkylcarbonyl;

5 R^2 is aryl, heterocyclo or alkyl;

R^4 is hydrogen, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, cycloalkenyl, or heterocyclo;

and

R^8 is alkyl or aryl.

10

23. A compound of claim 22 which is selected from the group consisting of:

(4*S*,5*R*)-3-benzoyl-2-ethoxy-4-phenyl-5-

15 oxazolidinecarboxylic acid, ethyl ester;

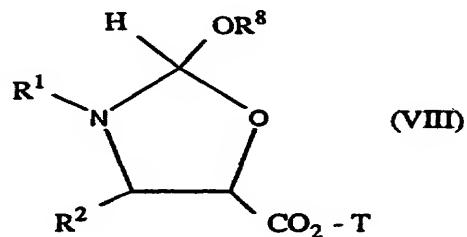
(4*S*,5*R*)-3-benzoyl-2-methoxy-4-phenyl-5-oxazolidinecarboxylic acid, ethyl ester; and

20

(4*S*,5*B*)-3-benzoyl-2-methoxy-4-phenyl-5-oxazolidinecarboxylic acid.

25

24. A compound of the following formula VIII or salt thereof:



where

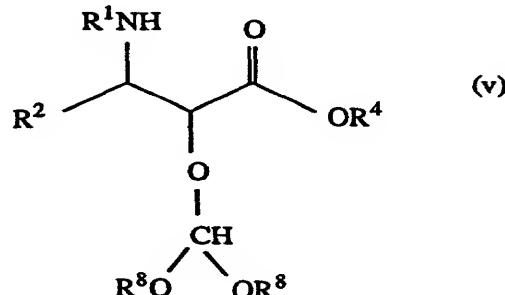
- R^1 is hydrogen, arylcarbonyl, alkoxycarbonyl or alkylcarbonyl;
- R^2 is aryl, heterocyclo or alkyl;
- R^8 is alkyl or aryl; and
- 5 T is a taxane moiety directly bonded at C-13 of said moiety.

25. A compound of claim 24 which is

- 10 $[2aR-(2a\alpha, 4\beta, 4a\beta, 6\beta, 9\alpha(4S^*, 5R^*), -11\alpha, 12\alpha, 12a\alpha, 12b\alpha]-3\text{-benzoyl}-2\text{-methoxy}-4\text{-phenyl}-5\text{-oxazolidinecarboxylic acid } 6,12b\text{-bis(acetyloxy)}-12\text{-(benzoyloxy)}-2a,3,4,4a,5,6,9,10,11,12,12a,12b\text{-dodecahydro}-11\text{-hydroxy}-4a,8,13,13\text{-tetramethyl}-5-$
- 15 $\text{oxo}-4\text{-[(triethylsilyl)oxy]}-7,11\text{-methano}-1\text{H-cyclodeca[3,4]benz[1,2-b]oxet-9-yl ester.}$

26. A compound of the following formula v or salt thereof:

20



where

- R^1 is hydrogen, arylcarbonyl, alkoxycarbonyl or alkylcarbonyl;
- 25 R^2 is aryl, heterocyclo or alkyl;

R⁴ is hydrogen, alkyl, alkenyl, alkynyl, aryl,
cycloalkyl, cycloalkenyl, or heterocyclo;
and
R⁸ is alkyl or aryl.